

We claim:

- 1 1. A method of forwarding a packet comprising:
 - 2 determining a logical grouping of a plurality of virtual private network tunnels
 - 3 based on a classification criterion;
 - 4 classifying a received packet based on said classification criterion; and
 - 5 based on a result of said classifying, using a selection algorithm associated
 - 6 with said logical grouping to determine one of said plurality of virtual private
 - 7 network tunnels on which to forward said packet.
- 1 2. The method of claim 1 wherein said selection algorithm is a table look-up
- 2 algorithm.
- 1 3. The method of claim 1 wherein said classifying said received packet comprises
- 2 inspecting contents of said received packet.
- 1 4. The method of claim 1 further comprising:
 - 2 determining a logical sub-grouping of said plurality of virtual private network
 - 3 tunnels based on a further classification criterion; and
 - 4 further classifying said received packet based on said further classification
 - 5 criterion.
- 1 5. The method of claim 1 wherein said selection algorithm includes a traffic
- 2 balancing algorithm.
- 1 6. The method of claim 1 wherein said virtual private network tunnels are defined as
- 2 Multi Protocol Label Switching label switched paths.
- 1 7. The method of claim 6 wherein said received packet has includes destination
- 2 address and said selection algorithm involves determining a label for a network
- 3 element having said destination address.
- 1 8. A router operable to:

2 determine a logical grouping of a plurality of virtual private network tunnels
3 based on a classification criterion;

4 classify a received packet based on said classification criterion; and

5 based on a result of said classifying, use a selection algorithm associated with
6 said logical grouping to determine one of said plurality of virtual private
7 network tunnels on which to forward said packet.

1 9. A computer readable medium containing computer-executable instructions which,
2 when performed by processor in router, cause the processor to:

3 determine a logical grouping of a plurality of virtual private network tunnels
4 based on a classification criterion;

5 classify a received packet based on said classification criterion; and

6 based on a result of said classifying, use a selection algorithm associated with
7 said logical grouping to determine one of said plurality of virtual private
8 network tunnels on which to forward said packet.

1 10. A method of forwarding a received packet in a virtual private network comprising:

2 associating a logical grouping of a plurality of virtual private network tunnels
3 with a classification criterion;

4 inspecting said received packet for a characteristic meeting said classification
5 criterion; and

6 if said received packet has said characteristic meeting said classification
7 criterion, forwarding said received packet on one of said plurality of virtual
8 private network tunnels.

1 11. The method of claim 10 further comprising, if said received packet has said
2 characteristic meeting said classification criterion, modifying said received packet
3 before said forwarding.

1 12. The method of claim 11 wherein said modifying comprises encapsulating said
2 received packet.

1 13. A router operable to:

2 associate a logical grouping of a plurality of virtual private network tunnels
3 with a classification criterion;

4 inspect said received packet for a characteristic meeting said classification
5 criterion; and

6 if said received packet has said characteristic meeting said classification
7 criterion, forward said received packet on one of said plurality of virtual private
8 network tunnels.